Spaceliner 100 Cost Model

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Spaceliner 100 Cost Model

Overview

- Objective: Deliver a capability to perform cost and economic analyses of Spaceliner 100 concept vehicles to support 3rd Generation technology development decisions
- Approach: A combination of existing cost models integrated with new and improved tools (air-breathing propulsion and operations cost analysis)
- Product: Prototype Integrated Spaceliner 100 Cost Model
- Spaceliner 100 Cost Model Team
  - MSFC Space Transportation Directorate
  - MSFC Engineering Cost Office
  - LaRC Vehicle Analysis Branch (VAB)
  - GRC Propulsion Systems Analysis Office
  - SAIC
  - Rocketdyne (Under Subcontract to SAIC)
  - Old Dominion University

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Approach

Spaceliner 100 Cost Component	Estimating/Analysis Capability
Non-Propulsion Subsystems	NAFCOM
Rocket Propulsion	Update of Rocketdyne Parametric Rocket Engine Cost Model
Air-Breathing Propulsion	NAFCOM Complexity Factor Generator (Notional)
Operations Cost	Modified Launch Systems Operations Cost Model (LSOCM)
Economic Analysis	ECO Business Analysis Model (Revised)

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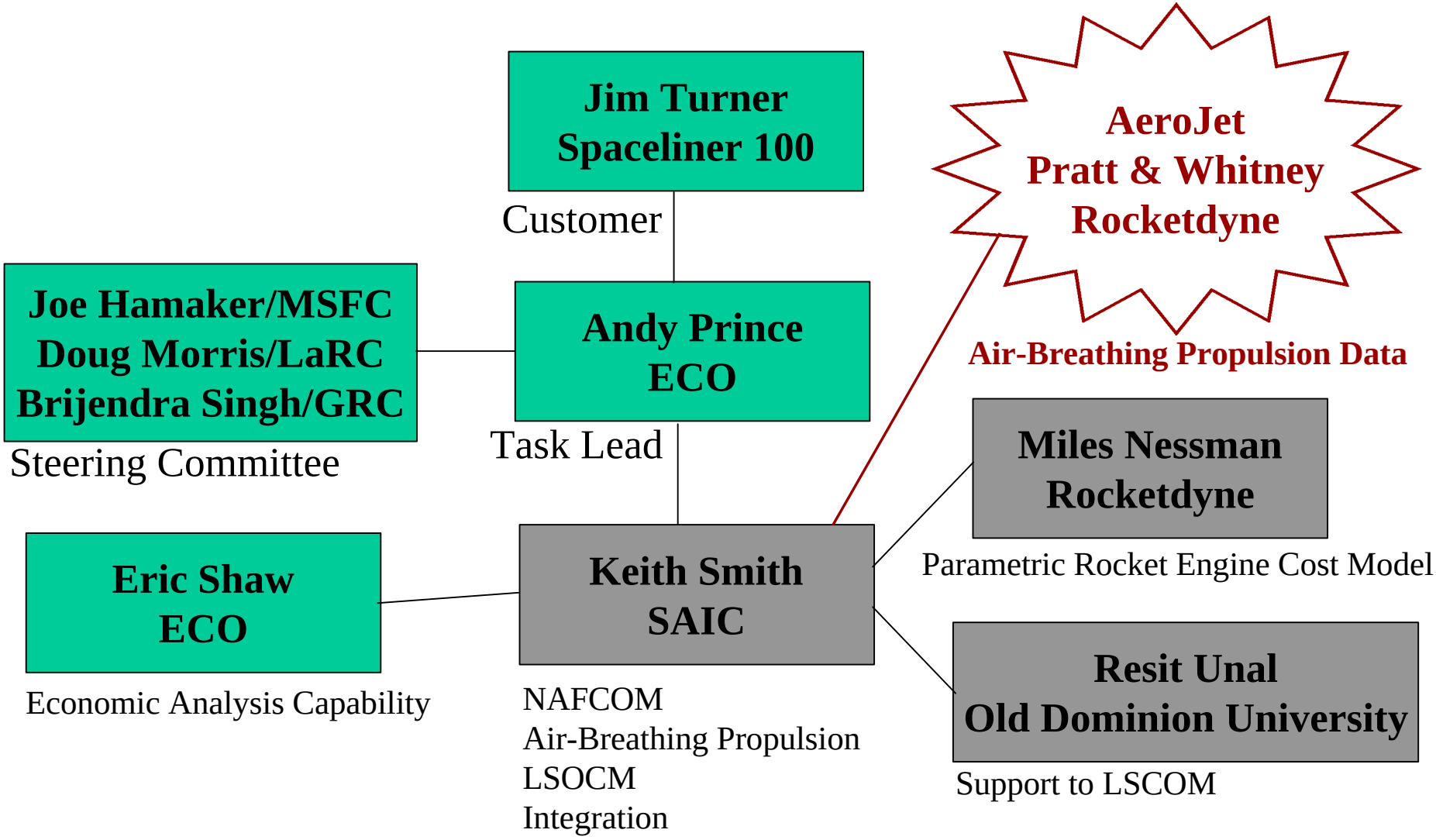
Participants and Responsibilities



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Schedule and Coordination

Schedule

- Near Term
  - Scope Problem and Design Approach
  - Identify and Begin Data Collection
- By February 29
  - Procurement Activities Completed
  - Development Approach Finalized
- Early March
  - “Kick-Off” Meeting at MSFC
- June
  - Completion of Updated Parametric Rocket Engine Cost Model
  - Completion of Prototype LSOCM
- August
  - Delivery of Prototype Version 1.0 Cost Model

Coordination

- Weekly Management Team Telecons
  - MSFC ECO
  - SAIC (Huntsville)
  - Rocketdyne
- Weekly LSOCM Telecons
  - MSFC ECO
  - SAIC (Tampa)
  - LaRC
  - ODU
- Monthly Steering Committee Telecons (Including Jim Turner)
- Weekly Status Reports to Customer

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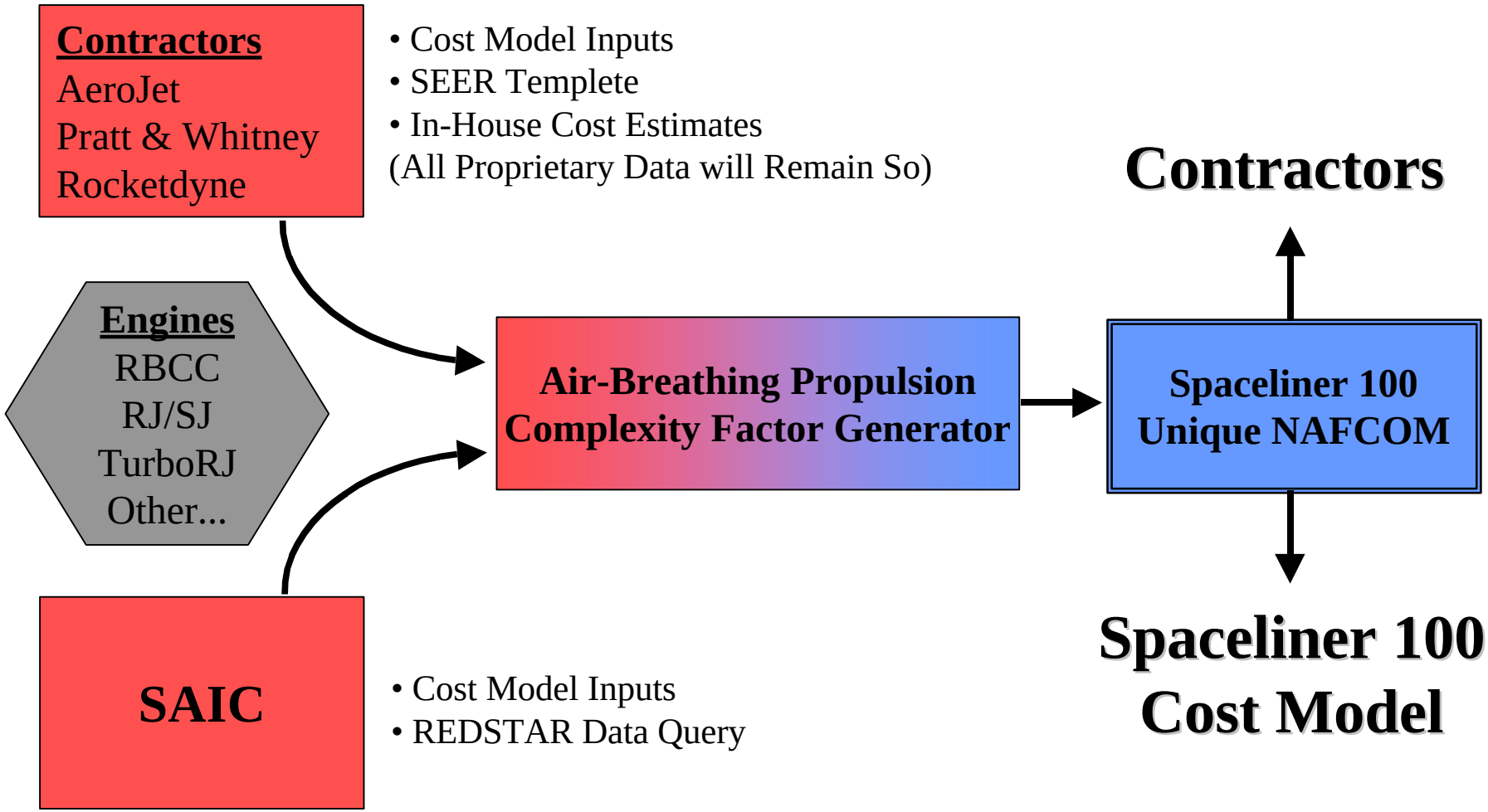
Air-Breathing Propulsion Cost Modeling



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Summary

- Life-Cycle Cost and Economic Analysis Capability Needed to Support 2nd and 3rd Generation Launch Vehicle Decisions
- Integrated Cost and Economic Analysis Tools needed to Support Integrated Design Environments
- Spaceliner 100 Cost Model is a Step Towards Fulfilling the RSTS Application Cost Model Requirements